

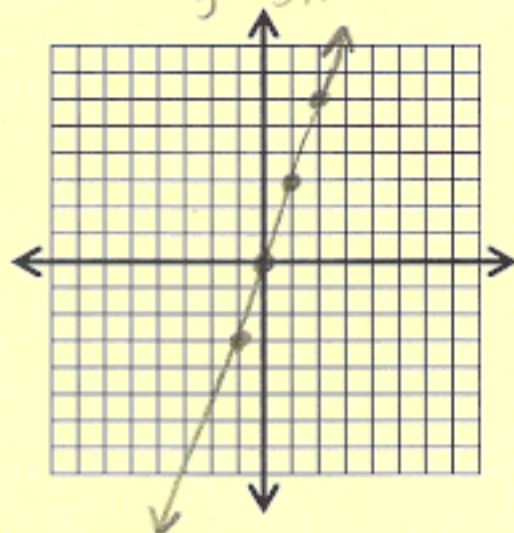
Algebra II Trig Review Chapter 1

Name Key

I. Graph each linear equation.

1. $2y = 6x$

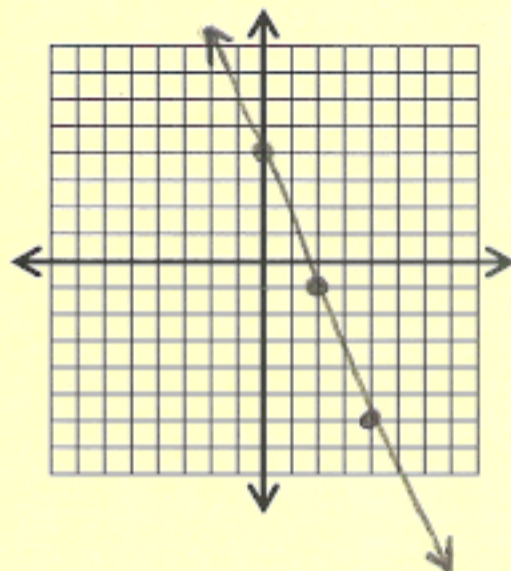
$y = 3x$



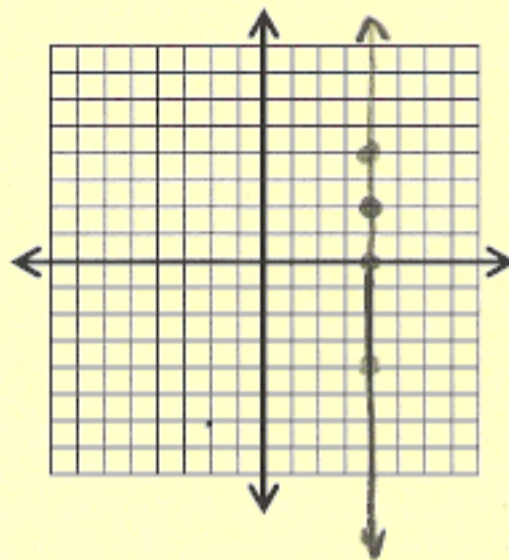
2. $5x + 2y = 8$

$2y = -5x + 8$

$y = -\frac{5}{2}x + 4$



3. $x = 4$



II. Write the equation of the line given:

1. The slope is -3 and the y-intercept is 7 .

$y = -3x + 7$

2. The slope is -4 and contains the point $(-5, 2)$.

$y - 2 = -4(x + 5)$

$y - 2 = -4x - 20$

$y = -4x - 18$

3. Contains the points $(6, 10)$ and $(2, 8)$

$m = \frac{10-8}{6-2} = \frac{2}{4} = \frac{1}{2}$

$y - 10 = \frac{1}{2}(x - 6)$

$y - 10 = \frac{1}{2}x - 3$

$y = \frac{1}{2}x + 7$

III. Write a linear equation to represent the table of values and state what the slope represents.

1.

Hours	Parking Fee
2	\$4.50
4	\$6.50

$\frac{\$2}{2 \text{ hours}} = \$1/\text{hr}$ How much you pay per hour.

$y - 4.50 = 1(x - 2)$

$y = x - 2 + 4.5$

$y = x + 2.50$

2.

Hours	Miles
2	104
5	260

$\frac{156}{3} = 52 \text{ mph}$

Miles per hour
 $104 = 52(2) + 0$

$y = 52x$

IV. If y varies directly as x , find the constant and write an equation.

1. $y = 15$ when $x = 3$

$\frac{15}{3} = k$ $k = 5$

$y = 5x$

2. $y = 5$ when $x = 12$

$\frac{5}{12} = k$

$y = \frac{5}{12}x$

V. Solve each proportion.

1. $\frac{2x}{7} = \frac{4}{5}$

$5(2x) = 7(4)$

$10x = 28$

$x = \frac{28}{10} = 2.8$

2. $\frac{x-7}{2} = \frac{2x+8}{5}$

$5(x-7) = 2(2x+8)$

$5x - 35 = 4x + 16$

$5x - 4x = 35 + 16$

$x = 51$

3. $\frac{x}{3} = \frac{x+3}{5}$

$5x = 3(x+3)$

$5x = 3x + 9$

$5x - 3x = 9$

$2x = 9$

$x = \frac{9}{2} = 4.5$